

IN THE SPECIFICATION:

Please insert the following paragraphs in page 24, after line 13:

Fig. 28A is an exemplary cross-sectional diagram shown in a direction parallel to gas flow.

Fig. 28B is an exemplary cross-sectional diagram shown in a direction parallel to gas flow.

Please replace the paragraph beginning at page 27, line 6 with the following amended paragraph:

Forming the wall face-portions 5 of the walls 3 so as to be deformed in an undulated shape in both the cell passage direction and the cell passage cross-section direction (see, e.g. Figures 1A, 1B, 28A and 28B) as with the undulated-wall honeycomb structure 1 not only increases the surface area of the walls 2 so that the interaction between the exhaust gas and the walls 3 can be increased, but the flow of the exhaust gas through the cell passages 2 can be made into a non-stationary flow by the cross-sectional form of the cell passages 2 changing while the cross-section area thereof is almost constant, thereby increasing interactions between the exhaust gas and the walls 3 even further. Thus, the catalyst properties can be improved. Figure 28A is an exemplary cross-sectional diagram in a direction parallel to gas flow, wherein a cross-section area continuously changes in the gas-flow direction with the undulated-wall honeycomb structure, and wherein the recessions and protrusions are synchronized (i.e. in-phase). Figure 28B is an exemplary cross-sectional diagram in a direction parallel to gas flow wherein a cross-

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section area continuously changes in the gas-flow direction with the undulated-wall honeycomb structure, and wherein the recessions and protrusions are not synchronized (i.e. out-of-phase).

Please replace the paragraph beginning at page 32, line 14 with the following amended paragraph:

Fig. 4, like Fig. 3, is a ~~is a~~ cross-sectional diagram illustrating an arrangement of an undulated-wall honeycomb structure 41 wherein undulated walls 45A and flat walls 45B exist in a mixed fashion. Comparing the undulated-wall honeycomb structures 31 and 41 reveals that the recessions and protrusions of the walls 35A and 45A are facing in different directions. In other words, the cross-section area of the cell passage cross-section in the passage direction is almost constant with the undulated-wall honeycomb structure 31, but the cell passage cross-section area continuously changes with the undulated-wall honeycomb structure 41, so that wide and narrow areas are formed.